

COOL IMAGES

Big Bang: The Movie

Two gold atoms stripped of their electrons and smashed together at nearly the speed of light disintegrate into quarks (white) and gluons (green), then coalesce into clusters (red). The clumps then break apart into kaons, pions, and other particles in these animation stills^{*} spanning about 10⁻²² of a second. That's the anticipated scene inside Brookhaven National Lab's Relativistic Heavy Ion Collider (RHIC), a new accelerator coming online this fall that will attempt to simulate the hot, dense quark-gluon plasma that existed just after the big bang (Science, 20 August, p. 1194). Brookhaven physicist Ronald Longacre says the animations are in part for the public, but they're also "a good debugging tool" for finding glitches in the computer code for modeling the reactions: "It's amazing how good your eye is at seeing pat-

terns" that don't jibe with theory. Follow the links to see more simulations by RHIC scientists and outside groups.

www.ccd.bnl.gov/visualization/gallery/au_on_au

NET NEWS

Time to Write Off Copyright?

The Internet has made it a cinch for people to share information, from a treasured quote to a snippet from a favorite band's new CD. But the I-Way is also terrifying authors and artists, who feel they're losing control over who pays to see or hear their work. That means society is going to have to rethink the whole idea of "copyright," according to a new report from a National Academy of Sciences panel. The group declined to work out the details of this and other thorny issues, however.

The report describes what it calls a "digital dilemma": Once a single digital copy of a work exists, anyone with Internet access can potentially see and duplicate it—indeed, just reading a Web page involves downloading a copy. That's a different world from the one in which a person borrows a book from the library. The panel concludes that it's time to examine whether "the notion of copy is an appropriate foundation for copyright law," or should be replaced with some other method of protecting an author's incentive to create. Congress should hold off on overhauling copyright law, the report adds, so that businesses and computer scientists can keep working on technical ways to control the flow of digital information—such as licensing access to Web sites.

The panel—a mix of publishers, librarians, authors, and computer scientists—concludes that another group of experts needs to work out just how to redefine copyright. The panelists also punted on whether authors should retain copyright on their works, with "many members" recommending the creation of a "task force on the status of the author."

Observers grumble that the report is short on specifics. But Yale librarian Scott Bennett says the fact that the panelists agreed on the importance of seeking a broad consensus on the fate of copyright is a major accomplishment after years of publishers, libraries, and authors "moving into very defensive camps."

HOT PICKS

Outbreaking news. ProMED-mail, the 5-year-old e-mail list that relays emerging infectious disease reports from around the world, has just launched a new site with summaries of the last 24 hours, a calendar, articles, links, and much more. www.promedmail.org

Looking for Leonids. Some experts predict that this year's Leonid meteor shower will be a full-fledged storm, offering a spectacle for skywatchers on 18 November. Check out www.leonidstorm.com for predictions, real-time data, and links; watch a live Web cast from a camera on a weather balloon at www.leonidslive.com; or add your photos to this new NASA community image library at leonids.hq.nasa.gov/leonids

Immuno flicks. The body's immune response involves a complex choreography of specialized cells. To help students understand these ideas, this site features Shockwave movies of steps such as somatic recombination, antigen loading, and B cell maturation. Also check out the histology atlas that lets you zoom in on immune cells in a slice of thymus or bone marrow. www.bio.davidson.edu/Biology/Courses/Bio307.html

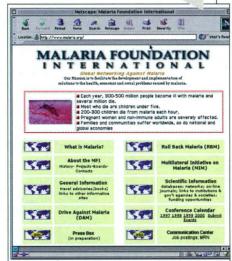
SITE VISIT

Malaria Central

Malaria, the mosquito-borne scourge that kills at least 1.5 million people worldwide each year, has spawned a vigorous counterattack. From a World Health Organization plan to help countries prevent and treat the disease to efforts to sequence the malaria parasite's genome (see News of the Week and p. 1351), experts have ratcheted up efforts over the past 2 years to cut malaria's toll. For a huge trove of malaria information and news, visit www.malaria.org, run by the nonprofit Malaria Foundation International.

The site's aim, says the foundation's Kathryn Nason-Burchenal, is to provide "one-stop shopping for malaria questions," for everyone from researchers to www.malaria.org

the lay public. You can read about the malaria parasite's life cycle and link to a world map of chloroquine resistance, or catch up on the current debate over an international treaty to ban DDT, a pesticide used to kill mosquitoes. There are updates on projects such as the Multilateral Initiative on Malaria, which is working to develop better malaria drugs and vaccines. Head for the scientific information section for links to journals, a free online epidemiology course, a



brand-new database in Israel of malaria parasite metabolic pathways, or the latest country-by-country stats: In Laos, for instance, there were 399 malaria deaths last year.

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